

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)						February 2002				
BUDGET ACTIVITY 5 - Engineering and manufacturing development			PE NUMBER AND TITLE 0604713A - Combat Feeding, Clothing, and Equipment							
COST (In Thousands)		FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost		88705	90244	94474	65466	56310	50554	45970	0	615471
548	MIL SUBSISTENCE SYS	1694	1846	1941	2051	2051	2078	2077	0	16510
667	LAND WARRIOR	59496	61241	60334	27692	18274	15256	10600	0	335719
668	SOLDIER ENHANCE PGM	13762	13992	14181	16455	16374	16597	16563	0	132500
C40	SOLDIER SUPPORT EQUIPMENT - ED	8636	8643	13367	14059	14418	11145	11159	0	87457
L40	CLOTHING & EQUIPMENT	5117	4522	4651	5209	5193	5478	5571	0	43285
<p><b><u>A. Mission Description and Budget Item Justification:</u></b>This program element supports Engineering and Manufacturing Development (EMD) and Non-Developmental Item (NDI) evaluation of unit/organizational equipment, clothing and individual equipment, field shelters, field service equipment, subsistence, and food service equipment that will enhance soldier efficiency, effectiveness, lethality, sustainability and survivability in accordance with Army Transformation Campaign Plan (TCP) objectives. This program element supports the system integration of demonstrated subsystems, components, or NDI in order to reduce integration risks associated with engineering and manufacturing development of various commodities, components, and technologies. This program element also supports demonstration of engineered development models and the associated developmental and operational testing of systems, components, and commodities prior to their transition to the Production and Deployment phase. The Soldier Support Equipment program supports the engineering and manufacturing development of a new generation of field service support items. The Land Warrior program will produce the first fully integrated fighting system for dismounted combat soldiers. The Soldier Enhancement program supports soldier items that will transition to production in three years or less.</p> <p>Supports the Legacy-to-Objective transition path of the Army's Transformation Campaign Plan.</p>										

**ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)****February 2002****BUDGET ACTIVITY****5 - Engineering and manufacturing development****PE NUMBER AND TITLE****0604713A - Combat Feeding, Clothing, and Equipment****B. Program Change Summary**

	FY 2001	FY 2002	FY 2003
Previous President's Budget (FY2002 PB)	88502	91002	73763
Appropriated Value	89321	91002	0
Adjustments to Appropriated Value	0	0	0
a. Congressional General Reductions	0	-758	0
b. SBIR / STTR	-713	0	0
c. Omnibus or Other Above Threshold Reductions	0	0	0
d. Below Threshold Reprogramming	915	0	0
e. Rescissions	-818	0	0
Adjustments to Budget Years Since FY2001 PB	0	0	20711
Current Budget Submit (FY 2003 PB )	88705	90244	94474

FY03 program includes an increase of \$19.2M (Proj 667) due to a program restructure and Army support to the Land Warrior program.

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BUDGET ACTIVITY 5 - Engineering and manufacturing development				PE NUMBER AND TITLE 0604713A - Combat Feeding, Clothing, and Equipment					PROJECT 548			
COST (In Thousands)				FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
548	MIL SUBSISTENCE SYS			1694	1846	1941	2051	2051	2078	2077	0	16510
<p><b><u>A. Mission Description and Budget Item Justification:</u></b>This project supports the engineering and manufacturing development and Non-developmental Item (NDI) evaluation of combat feeding equipment to enhance soldier efficiency and survivability, and to reduce food service logistics requirements for all four services. The project supports multi-fuel, rapidly deployable field food service equipment initiatives and engineering and manufacturing development to improve equipment through enhanced safety in food service, and decreased fuel and water requirements.</p> <p>This project develops critical enablers that support the Legacy-to-Objective transition path of the Army’s Transformation Campaign.</p> <p><b><u>FY 2001 Accomplishments:</u></b></p> <ul style="list-style-type: none"><li>• 336 Integrated field kitchen equipment efficiency upgrades and conducted Technical and Operational Evaluations.</li><li>• 147 Completed Developmental and Operational testing of Advanced Food Sanitation Center, conducted Milestone C and transitioned into Production and Deployment.</li><li>• 268 Completed fabrication and technical testing of Temporary Lightweight Kitchen and successfully demonstrated to the Air Force.</li><li>• 252 Completed development and initiated testing of noise level and reduced firing rate changes for the field kitchen burner. Designed a cold weather kit to allow operation in cold environments.</li><li>• 192 Completed modifications and conducted in-house evaluations of the improved Tray Ration Heater System, demonstrating enhanced operational capability, and 40% cost reduction.</li><li>• 132 Performed in-house and user evaluations of improved sanitation methods for mess kits and provided findings to the AF.</li><li>• 367 Conducted Milestone B and awarded development contract for design and fabrication of Advanced Design Refrigerator with enhanced transportability and improved thermal efficiency.</li></ul> <p>Total 1694</p>												

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<b><u>FY 2002 Planned Program</u></b>		
• 450	Design/Evaluate new food service equipment for Navy 21 (Surface, Subs), transition to Navy, initiate development of model for equipment selection for retrofit and integration into new ship designs.	
• 250	Conduct user testing and complete Technical Data Package (TDP) for Temporary Lightweight Kitchen, Transition to Air Force.	
• 357	Complete fabrication of Advanced Design Refrigerator and conduct Developmental Testing.	
• 61	Complete TDP for Field Kitchen Efficiency Upgrades and transition to procurement.	
• 175	Complete user testing of upgraded Tray Ration Heater System to demonstrate enhanced mobility, increased ration preparation capability and cost savings.	
• 231	Complete development and testing of Modern Burner Unit (MBU) Cold Weather Kit. Transition changes for noise reduction and heat output into kitchen burner production. Initiate development of Thermostatic Control Kit and conduct a reliability study for the MBU.	
• 322	Fabricate prototype Kitchen ISO Container that is compatible with the Army Load Handling System without the need for additional material handling equipment.	
Total	1846	
<b><u>FY 2003 Planned Program</u></b>		
• 274	Conduct Technical and Operational Testing of thermostatically controlled MBU, and incorporate Cold Weather Kit and thermostatic control into the burner production contract.	
• 255	Conduct Technical and Operational Testing of prototype kitchen ISO container that is compatible with the Army Load Handling System without the need for additional material handling equipment.	
• 223	Conduct equipment evaluation for optimizing the future Mobile Kitchen Trailer configuration and develop technical data for use in a rebuild program.	
• 350	Conduct Operational Test of Advanced Design Refrigerator and conduct Milestone C.	
• 237	Complete Modifications and Prepare Technical Data Package for upgraded Tray Ration Heater System and deliver prototype system to the Marine Corps.	
• 602	Design/Evaluate new food service equipment for Navy 21 (Surface,Subs), transition to Navy, complete model for equipment selection for retrofit and integration into new ship designs.	
Total	1941	

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BUDGET ACTIVITY

**5 - Engineering and manufacturing development**

PE NUMBER AND TITLE

**0604713A - Combat Feeding, Clothing, and Equipment**

PROJECT

**548**

## **B. Other Program Funding Summary**

	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>To Compl</u>	<u>Total Cost</u>
RDTE, 0603747.610, Food Adv Dev	3292	3706	3907	4079	4089	4219	4228	Continuing	Continuing
OPA3, M65803, Kitchen, Containerized, Field	6077	4250	11158	7449	7203	0	0	0	43169
OPA 3, M65802, Sanitation Center, Field Feeding	4323	2771	8954	8928	8986	8079	8980	Continuing	Continuing
OPA3, M65801, Refrigerated Containers	1466	1066	0	0	0	0	0	0	3459

**C. Acquisition Strategy:** Complete engineering and manufacturing development of food items and equipment for transition to procurement.

## **D. Schedule Profile**

	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
Design and test concepts for improved Mess Kit Sanitation	4Q						
Design and Evaluate US Air Force Temporary Lightweight Kitchen	4Q						
Conduct Milestone B and award Developmental Contract for the Advanced Design Refrigerator	3Q						
Conduct Technical and Operational Evaluations on Field Kitchen Equipment Efficiency Upgrades	3Q						
Complete design and fabrication of Advanced Design Refrigerator - 1200		3Q					
Conduct Technical and Operational Testing on prototype kitchen ISO container			3Q				
Conduct Developmental Testing for the Advanced Design Refrigerator - 1200		4Q					
Transition noise reduction and heat output changes to MBU production		4Q					
Complete TDP on the Advanced Design Refrigerator - 1200 (Milestone C)			4Q				

ARMY RDT&E COST ANALYSIS(R-3)									February 2002			
BUDGET ACTIVITY 5 - Engineering and manufacturing development					PE NUMBER AND TITLE 0604713A - Combat Feeding, Clothing, and Equipment					PROJECT 548		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . SBCCOM	In-House	SBCCOM	8347	185		907		925		Continue	Continue	Continue
b . Various	Various	Various	1004	930		144		254		Continue	Continue	Continue
Subtotal:			9351	1115		1051		1179		Continue	Continue	Continue
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0
Remarks: Not Applicable												

ARMY RDT&E COST ANALYSIS(R-3)									February 2002			
BUDGET ACTIVITY <b>5 - Engineering and manufacturing development</b>					PE NUMBER AND TITLE <b>0604713A - Combat Feeding, Clothing, and Equipment</b>					PROJECT <b>548</b>		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . TECOM/OEC	MIPR	Various	2471	491		530		575		Continue	Continue	Continue
Subtotal:			2471	491		530		575		Continue	Continue	Continue
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Project Ofc Management	In-House	SBCCOM	600	88		265		187		Continue	Continue	Continue
Subtotal:			600	88		265		187		Continue	Continue	Continue
Project Total Cost:			12422	1694		1846		1941		Continue	Continue	Continue

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BUDGET ACTIVITY 5 - Engineering and manufacturing development				PE NUMBER AND TITLE 0604713A - Combat Feeding, Clothing, and Equipment				PROJECT 667		
COST (In Thousands)		FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
667	LAND WARRIOR	59496	61241	60334	27692	18274	15256	10600	0	335719
<p><b><u>A. Mission Description and Budget Item Justification:</u></b> Land Warrior (LW) establishes the Infantry soldier as the Army's unique weapons platform. It is a first generation integrated fighting system for soldiers that provides combat overmatch for the five types of Infantry (air assault, airborne, light, mechanized, and ranger), and Army Special Operations Forces (ASOF) in the close and personal fight. Land Warrior provides enhanced capabilities to the dismounted soldier and is the genesis of the Objective Force Warrior (OFW). LW development takes maximum advantage of Commercial-Off-The-Shelf (COTS), as well as Government-Off-The-Shelf (GOTS) components and technologies, along with a rapid prototyping process. The LW program minimizes the use of LW -unique hardware and software and has an open systems architecture. This architectural approach provides greater flexibility to incorporate technology upgrades as they become available, reduces intellectual and proprietary rights, and reduces developmental and ownership costs. LW provides the foundation system upon which Mounted Warrior, Air Warrior, and Future Warrior integrated systems will be based, as well as support to the Marine Corps and other services. CSA has said that the Soldier is centric to Army Transformation and LW is critical to transformation of the Soldier.</p> <p>This program supports the Legacy-to-Objective transition path of the Army's Transformation Campaign Plan and is the genesis for the Objective Force Warrior (OFW).</p> <p><b><u>FY 2001 Accomplishments:</u></b></p> <ul style="list-style-type: none"> <li>47222 Incorporated lessons learned from operational experiments conducted during the Joint Contingency Forces Advanced Warfighting Exercises (JCFAWE) into system design to add and improve system functionality and performance in the areas of weight reduction, more flexible design and improved integration into MOLLE to meet threshold requirements of the ORD. Conducted critical design review and initiated contractor testing for V1.0 prototypes to validate system functionality prior to development test. Conducted risk mitigation efforts to improve hardware and software integration and functionality. Fabricated six LW V1.0 prototypes for evaluation during fightability assessments, and for software development. Provided contractor logistics support of hardware and software during fightability assessments.</li> <li>1238 Prepared test documentation and technical test plan, conducted user fightability assessments, and improved hardware and software design to improve functionality and increase soldier acceptance. Conducted technical test readiness reviews. Began development of training package and manuals for DT and began transitioning into electronic format. Began development of interactive training scenarios and evaluated integrated training environment.</li> </ul>										



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<b><u>FY 2001 Accomplishments: (Continued)</u></b>		
4927	Conducted LW demonstrations to higher headquarters and other countries to demonstrate system capability and functionality. Supported NATO Land Group 3 and other partnered countries to ensure compatibility with potential multinational military operations.	
6109	Continued program management and systems engineering support from other government agencies for overall program efforts. Conducted technical and program reviews, and increased program office resources to respond to Army Category (ACAT) II programmatic requirements and posture for anticipated ACAT I designation.	
Total 59496		
<b><u>FY 2002 Planned Program</u></b>		
42599	Fabricate remaining LW V1.0 systems that will be used for development testing (26) and operational testing (170). Conduct contractor acceptance testing to validate system functionality and integration prior to testing. Provide contractor logistics support of hardware and software on test units during early operational exercise (EOE)/DT.	
5381	Complete contractor testing prior to EOE/DT. Conduct airborne certification, user fightability assessment #4, and obtain necessary safety releases. Complete development of training program of instruction, lesson plans, and computer based training (CBT)/interactive multimedia instruction (IMI). Develop range, targetry, and marksmanship tasks and training, tactics and procedures (TTP). Update and transition training package and manuals to electronic format. Complete development of interactive training scenarios and evaluate integrated training environment. Conduct EOE to measure reliability and performance during DT and complete test reports. Conduct tactics training, operators/leaders training, and direct support maintenance training prior to OT.	
5560	Continue operation of PM Soldier System - Fort Monmouth, and PM Soldier LW Forward at Fort Bragg. Conduct LW demonstrations to higher headquarters and other countries to demonstrate system capability and functionality. Support to NATO Land Group 3 and other partnered countries to ensure compatibility with potential multinational military operations.	
7701	Program management and systems engineering support from other Government agencies for overall program efforts. Conduct technical and program reviews, Army System Acquisition Review Council (ASARC) reporting/briefings, to Army Category (ACAT) I or ACAT II programmatic requirements.	
Total 61241		

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<b><u>FY 2003 Planned Program</u></b> <ul style="list-style-type: none"> <li>34565 Incorporate IOTE software and hardware fixes into V1.0. Begin Block IIA development which addresses LW to Battle CT integration to meet KPP for Army Battle Command System (ABCS) interoperability with Light Digital Tactical Operations Center (TOC) and to provide on-board power recharging capability in interim force vehicle for LW equipped soldiers. Will also begin development and application of Training Aids Devices Simulation System (TADSS) to meet VCSA guidance.</li> <li>10740 Conduct operational test readiness reviews (OTRR). Finalize training materials and training package. Conduct IOTE and provide Contractor Logistics Support (CLS) during DT/IOTE. Conduct government system assessment of operational test results.</li> <li>6219 Initiate procurement planning efforts for follow on full rate production full/open LW competition contract. Begin Source Selection Evaluation Board (SSEB) process for production contract award. Conduct technical and program reviews for In Process Review (IPR) or Army System Acquisition Review Council (ASARC) reporting/briefings in preparation for Milestone III decision. Continue operation of PM Soldier System - Fort Monmouth and PM Soldier LW Forward at Fort Bragg. Continue LW demonstrations to other countries to demonstrate system capability and functionality. Support to NATO Land Group 3 and other partnered countries to ensure compatibility with potential multinational military operations.</li> <li>8810 Program management and systems engineering support from other government agencies for overall program efforts.</li> </ul> <p>Total 60334</p>		

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## BUDGET ACTIVITY

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## PE NUMBER AND TITLE

**0604713A - Combat Feeding, Clothing, and Equipment**

## PROJECT

**667**

### B. Other Program Funding Summary

	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>To Compl</u>	<u>Total Cost</u>
RDTE, 0603001.J50, Future Warrior Technology Integration	6099	36635	35913	62865	51329	64979	61313	Continuing	Continuing
OPA3, M80500, Land Warrior	0	0	0	97621	112208	138273	143498	Continuing	Continuing
RDTE, 0603747.669 Clothing and Equipment	3360	4788	4881	5533	5258	5529	5918	Continuing	Continuing
RDTE, 0604713.L40 Clothing and Equipment	5117	4522	4651	5209	5193	5478	5571	Continuing	Continuing

**C. Acquisition Strategy:** The LW Program takes maximum advantage of components available from other Government agencies as well as Commercial-Off-the-Shelf (COTS) components and technologies. The program minimizes the use of LW -unique hardware and software using an open systems architecture. This architectural approach will provide greater flexibility to incorporate technology upgrades as they become available, reduce intellectual and proprietary rights issues, and reduce development and support costs. The LW development effort will utilize Other Transactions Agreement as the procurement vehicle to increase the level of commercial company involvement and will maximize the rapid prototyping process. The LW system development will conform to standards identified in Interface Control Documents (ICD's), and System Performance Specifications, which will be controlled by the Government. The follow-on production effort will utilize standard FAR-based full/open competition (best value, price based approach) based on government provided system level performance specifications and system level ICD's. The LW total procurement objective is approximately 48,801 units. The LW Program supports the Chief of Staff of the Army's (CSA) vision of establishing lethal forces through the use of commercial technologies to lighten the force; increase soldier lethality, and making the force more survivable, more mobile, and more deployable. This program supports the Legacy-to-Objective transition path of the Army's Transformation Campaign Plan and is the genesis for the Objective Force Warrior (OFW).

### D. Schedule Profile

	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
Award Developmental Contract/Follow On Options	3Q	1-2Q	1Q				
Conduct LW IPRs	1-4Q	1-4Q					
Conduct LW Preliminary Design Review (PDR) and Critical Design Review (CDR)	2Q						
Deliver prototypes software integration (FY01) and safety testing (FY02)	4Q	2Q					
Conduct Safety Testing and obtain safety release		2Q					
Deliver DT prototypes	4Q	2Q					
Conduct EOE/DT and Report		3-4Q					

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<b><u>D. Schedule Profile (continued)</u></b>	<b><u>FY 2001</u></b>	<b><u>FY 2002</u></b>	<b><u>FY 2003</u></b>	<b><u>FY 2004</u></b>	<b><u>FY 2005</u></b>	<b><u>FY 2006</u></b>	<b><u>FY 2007</u></b>
Deliver IOTE prototypes			1Q				
Conduct IOTE Safety release and training			1-2Q				
Conduct Initial Operational Test and Evaluation (IOTE)			2-3Q				
Milestone C/III				1Q			
Production Contract Award/Subsequent Options				2Q	1Q	1Q	1Q
First Unit Equipped (FUE)				4Q			
LW Block IIA/B Development/Integration/Test			2-3Q	1-4Q	1-4Q	1-4Q	
Production Contract Award and Options (Block II)					2Q	1Q	1Q
LW Block III Development							1-4Q
Initial Operational Capability (IOC)*					4Q		

ARMY RDT&E COST ANALYSIS(R-3)									February 2002			
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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Risk Mitigation Efforts - CBT/IMI	Task Order	Computer Sciences Corp (CSC) Eatontown, NJ	35533	2662	3Q	650	1Q	550	1Q	0	39395	0
b . Other Transactions Agreement (OTA)	FFP	OTA Consortium, Vienna, VA	0	41254	1Q	39600	1Q	13829	1Q	Continue	Continue	Continue
c . Global Positioning Systems Cards/Antennas		ARINC, Annapolis, MD	0	717	3Q	132	1Q	0		0	849	0
d . Develop Block IIA Reqmts (M&S, BCT interconn, TADSS etc.)	TBD	TBD	0	0		0		10137	2Q	0	10137	0
e . Ruggedized Batteries/Rechargers (CMR/Others TBD)	Time & Materials	CMR Technologies, Island Heights, NJ	0	1581		1085	1-2Q	3121		0	5787	0
f . Raytheon Systems	CPAF	Raytheon, El Segundo, CA	122348	0		0		0		0	122348	0
g . GFE - Multifunction Laser/Thermal Weapon Sights, etc.	MIPR	PM Night Vision, Fort Belvoir, VA	0	544		520		6350		0	7414	0
h . ORACLE	FFP	DLT Solutions, Herndon, VA	0	286	2Q	289	2Q	293	2Q	0	868	0
i . Multiband Inter/Intra Team Radio (MBITR)/Radios	Task Order	Racal Communications, Inc., Rockville, MD	0	178	2Q	38		0		0	216	0

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I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
j . Security DAA SME/Accreditation	GSA/Other		0	0		285		285		0	570	0
Subtotal:			157881	47222		42599		34565		Continue	Continue	Continue
Remarks: Award dates covering multiple quarters reflect multiple awards.												
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . CECOM Matrix Support	MIPR	CECOM, Ft. Monmouth, NJ	8274	1898		1920		2020		0	14112	0
b . TSM -Soldier support to the program	MIPR	TSM Soldier, Fort Benning, GA	1225	200		200		200		0	1825	0
c . Modern Tech Inc. - support contractors	Task Order	Modern Tech Inc., Springfield, VA	8675	749	1Q	688	1Q	1030	1Q	0	11142	0
d . System Engineering support (IV&V/Security/SEPM)	GSA Contracts	US Military Academy, West Point, NY	360	573	1Q	742	1Q	817	1Q	0	2492	0
e . PM Soldier Electronics in house support	In house	PM Soldier Systems, Ft Belvoir, VA	10255	491		1128		1292		0	13166	0
f . Physical Integration Team - LW integration support	MIPR	SBCCOM - Natick, MA	0	282		301		300		0	883	0

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II. Support Cost (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
g . CECOM NVESD, Belvoir, VA Matrix Support	MIPR	CECOM NVESD, Fort Belvoir, VA	0	559		371		500		0	1430	0
h . Various Government Agencies			0	175		210		60		0	445	0
Subtotal:			28789	4927		5560		6219		0	45495	0
Remarks: Buys government and contract engineering and logistical support for overall program support.												
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Testing Organizations - Developmental testing	MIPR	ATC, WSMR, EPG, etc.	3948	233		2400		600		Continue	Continue	Continue
b . Testing Organizations - Operational testing	MIPR	OEC, ATEC	5995	238		2635		10080		Continue	Continue	Continue
c . Test Equip/Support	Various	Various	3749	411		128		60		Continue	Continue	Continue
d . MOLLE Integration (Natick, MA)	MIPR	ARI, Ft Benning, GA	445	201		0		0		0	646	0
e . Airworthiness/Airborne Certification/Safety testing	Various		0	155		138		0		0	293	0

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III. Test and Evaluation (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
f . MAIS Integration/Halo	SBCCOM		0	0		80		0		0	80	0
Subtotal:			14137	1238		5381		10740		Continue	Continue	Continue
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . PM Soldier/PEO oversight of LW program	In-House	PM Soldier Systems, Fort Belvoir, VA	7888	2332		4736		5140		0	20096	0
b . Wexford Group - Management Support	Task Order	Wexford Group, Vienna, VA	1080	738	1Q	790	1Q	1000	1Q	0	3608	0
c . CYIOS, Inc., LAN Spt	Task Order	CYIOS, Washington, DC	825	400	1Q	0		0		0	1225	0
d . ACS, Financial Database support	Task Order	ACS, Arlington, VA	60	196	1-2Q	100	1-2Q	500	1Q	0	856	0
e . BRTRC - Support Contractors	Task Order	BRTRC, Fairfax, VA	165	304	1-2Q	370	1-2Q	370	2-3Q	0	1209	0
f . SBCCOM Spt	MIPR	SBCCOM-Natick, MA/APG, MD	1160	839		505		500		0	3004	0



ARMY RDT&E COST ANALYSIS(R-3)									February 2002			
BUDGET ACTIVITY 5 - Engineering and manufacturing development					PE NUMBER AND TITLE 0604713A - Combat Feeding, Clothing, and Equipment					PROJECT 667		
IV. Management Services (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
g . SY-Tech	Task Order	Sherman Oaks, CA	694	1200	1Q	1100	1Q	1200	1Q	0	4194	0
h . Dynetics	Task Order	Huntsville, AL	140	100	1Q	100	1Q	100	1Q	0	440	0
Subtotal:			12012	6109		7701		8810		0	34632	0
Remarks: Award dates covering multiple quarters reflect multiple awards.												
Project Total Cost:			212819	59496		61241		60334		Continue	Continue	Continue

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2002		
BUDGET ACTIVITY <b>5 - Engineering and manufacturing development</b>				PE NUMBER AND TITLE <b>0604713A - Combat Feeding, Clothing, and Equipment</b>				PROJECT <b>668</b>	
COST (In Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
668 SOLDIER ENHANCE PGM	13762	13992	14181	16455	16374	16597	16563	0	132500
<p><b><u>A. Mission Description and Budget Item Justification:</u></b> This project supports accelerated integration, modernization, and enhancement efforts of lighter, more lethal weapons and improved Soldier items including lighter, more comfortable load-bearing equipment, field gear, survivability items, communications equipment, and navigational aids. Soldiers are managed in three categories: dismounted Soldiers, combat crews (air and ground), and other Soldiers. Projects generally are completed in three years or less.</p> <p>This program supports the Legacy-to-Objective and Legacy-to-Interim transition path of the Transformation Campaign Plan (TCP).</p> <p><b><u>FY 2001 Accomplishments:</u></b></p> <ul style="list-style-type: none"> <li>2261 Completed evaluation/type classify/transition to production: 12 Gauge Breaching Round, Sniper Accessory Kit, Backup Iron Sight for Modular Weapon System, IR Laser Pattern Generation Pointer, Micro Rappel System, and Improved Cold Weather Mask.</li> <li>4618 Continued evaluation/procurement of prototypes and testing of: Joint Service Shotgun, M240B Combat Ammunition Pack, 5.56 Non-Lethal Muzzle Launched Ordnance, Parachutist Drop Bag, Collapsible Grappling Hook, 12 Gauge Penetrating/Irritating Cartridge, Tactical Assault Ladder System, Multiple Utility Digging System, Tactical Search Mirrors, Concealable Stab Protective Body Armor, POL Handlers Glove System, Boot Gaiters, Camouflage Uniform System for Soldiers, Family of Batons/Night Sticks, Protective Glove System, Survival Egress Air (SEA) MK2.0 Device, Face Paint (Compact), and Improved Combat Shelter.</li> <li>3273 Initiated market surveys and/or evaluations: Close Combat Mission Capability Kit, M84 Reloadable Fuze, Integrated Laser White Light Pointer, Individual Riot Control Agent Disperser, Law Enforcement/Special Reaction Team (LE/SRT) Civil Disturbance Equipment Bag, Double Hearing Protection and Communication Capability, Neck Protector, Permethrin Treatment of Nomex, and Nuclear Biological Chemical (NBC) Compatible Drinking System.</li> <li>2500 Continue In-house engineering support services, computer services, conducted technical and program reviews.</li> <li>265 Program Terminated: Lightweight Fragmentation Hand Grenade - Not capable of meeting operational requirements. Small Unit Multi-Purpose Trailer - re-directed. Double Hearing Protection and Communication Capability - requirement satisfied by using the Modular Integrated Communications Helmet. 12 Gauge Penetrating/Irritating Cartridge - small production requirement does not justify high ammunition testing requirements and associated costs. Riot Control Agent Neutralizer - human health testing issues.</li> </ul>									

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		February 2002
BUDGET ACTIVITY 5 - Engineering and manufacturing development	PE NUMBER AND TITLE 0604713A - Combat Feeding, Clothing, and Equipment	PROJECT 668
<b><u>FY 2001 Accomplishments: (Continued)</u></b>		
845	Program Redirected: Long Range Sniper Rifle - User requirements reassessed - require semi-automatic versus bolt action rifle - redirected to XM107 Semi-Automatic Anti-Materiel Rifle. Long Range Sniper Cartridge - User requires calibre .50 cartridge for semi-automatic rifle versus bolt action - redirected to XM107 Sniper Ammo. M203 Enhanced Fire Control - Army changes to M203 MEFC Operational Requirements Document (ORD) resulted in redirection to M203 Grenade Launched Rail Systems	
Total 13762		
<b><u>FY 2002 Planned Program</u></b>		
4507	Complete evaluation/type classify/transition to production: 5.56 Non-Lethal Muzzle Launched Ordnance, Joint Service Combat Shotgun, M203 Grenade Launched Rail System, M240B Combat Ammunition Pack, XM107 Semi-Automatic Anti-Materiel Rifle, Parachutists Drop Bag, Tactical Assault Ladder System, Collapsible Grappling Hook, Multiple Utility Digging System (MUDS), Face Paint(Compact), Neck Protector, Concealable Stab Protective Body Armor, Tactical Search Mirrors, Family of Batons and Night Sticks, Boot Gaiters, POL Handlers Glove System, Survival Egress Air (SEA) MK 2.0, Protective Gloves, and LE/SRT Civil Disturbance Equipment Bag.	
4329	Continue evaluation/procure prototypes and/or test: Close Combat Mission Capability Kit, M84 Reloadable Fuze, XM107 Sniper Ammunition, Integrated Laser White Light Pointer, Camouflage Uniform System for Soldiers, Permethrin Treatment of Nomex, Improved Combat Shelter, and NBC Compatible Drinking System.	
2773	Initiate market surveys and/or evaluations: M9 Pistol Rail, Collapsible Buttstock for M249 Machine Gun, Hand Thrown Stingball Grenade, Individual Riot Control Agent Dispenser, Body Restraint, Modular Glove, Aircrew Immersion Coveralls, Aircrew Survival/Egress Knife, and Tactical Thigh Holster.	
2383	In-house engineering support services, computer services, conduct technical and program reviews.	
Total 13992		
<b><u>FY 2003 Planned Program</u></b>		
3449	Complete evaluation/type classify/transition to production: XM107 Sniper Ammunition, M84 Reloadable Fuze, Integrated Laser White Light Pointer, Individual Riot Control Agent Dispenser, Modular Glove, Combat Uniform for Soldiers, Permethrin Treatment of Nomex, Tactical Thigh Holster, Body Restraint, Aircrew Immersion Coveralls, Aircrew Survival/Egress Knife, Improved Combat Shelter, and NBC Compatible Drinking System.	
3987	Continue evaluation/procure prototypes: Close Combat Mission Capability Kit, M9 Pistol Rail, Collapsible Buttstock for M249 Machine Gun, Hand Thrown Stingball Grenade, and Face Paint (Stick).	

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2002

## BUDGET ACTIVITY

**5 - Engineering and manufacturing development**

## PE NUMBER AND TITLE

**0604713A - Combat Feeding, Clothing, and Equipment**

## PROJECT

**668**

### FY 2003 Planned Program (Continued)

- 4228 Initiate market surveys and/or evaluations on new items to commence in FY 03.
- 2517 In-house engineering support services, computer services, conduct technical and program reviews.

Total 14181

<b><u>B. Other Program Funding Summary</u></b>	<b><u>FY 2001</u></b>	<b><u>FY 2002</u></b>	<b><u>FY 2003</u></b>	<b><u>FY 2004</u></b>	<b><u>FY 2005</u></b>	<b><u>FY 2006</u></b>	<b><u>FY 2007</u></b>	<b><u>To Compl</u></b>	<b><u>Total Cost</u></b>
OPA3, MA6800, Soldier Enhancement	3947	3127	2488	4382	4841	4929	4747	Continuing	Continuing
OPA2, BA5300, Soldier Enhancement	19164	5096	6114	8196	8228	8489	8481	Continuing	Continuing
WTCV, GC0076, Small Arms (SEP)	3473	301	1954	2392	1901	1956	1954	Continuing	Continuing
WTCV, GZ1290, Squad Automatic Wpn (Mods)	9865	4419	4119	7690	0	0	0	Continuing	Continuing
WTCV, GZ2800, M16 Rifle Mods	9504	2085	0	2419	2410	2097	0	Continuing	Continuing
WTCV, GB3007, M4 Carbine Mods	2481	0	9267	9889	7430	5932	5920	0	50312
WTCV, G01500, Sniper Rifle	3056	2134	8913	8934	8915	8898	8090	0	49085
WTCV, GC0925, Mods	779	1252	817	1288	1281	1351	1348	Continuing	Continuing
PAA, F47500, 7.62mm AP	0	2395	2414	400	400	400	400	0	7717
PAA, F47600, 5.56mm AP	1325	3526	3559	3559	3560	600	600	0	18555
PAA, F00900, 40mm Canister	0	0	5548	0	0	0	0	0	5548
PAA, E84900, XM84 Stun Grenade	2336	2381	0	0	0	0	0	0	6456
PAA, E86400, 12 Gauge Non Lethal	936	0	0	0	0	0	0	0	936
PAA, E91100, XM95 Cartridge, Non Lethal Crowd	6311	6487	0	0	0	0	0	0	12798
PAA, E89000, 40mm Non Lethal	1870	1960	0	0	0	0	0	0	5356
OMA, 121017, Central Funding & Fielding	61706	79515	72427	89407	110978	113854	114417	Continuing	Continuing

**C. Acquisition Strategy:** The Soldier Enhancement Program (SEP) focuses on developmental initiatives and integration efforts that lend

**ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)****February 2002**

BUDGET ACTIVITY

**5 - Engineering and manufacturing development**

PE NUMBER AND TITLE

**0604713A - Combat Feeding, Clothing, and  
Equipment**

PROJECT

**668**

themselves to accelerated acquisition and fielding in the near term (within three years). New SEP candidates are reviewed and approved annually. SEP items are procured from multiple appropriations, i.e., OMA, OPA, WTCV, and PAA.

<b><u>D. Schedule Profile</u></b>	<b><u>FY 2001</u></b>	<b><u>FY 2002</u></b>	<b><u>FY 2003</u></b>	<b><u>FY 2004</u></b>	<b><u>FY 2005</u></b>	<b><u>FY 2006</u></b>	<b><u>FY 2007</u></b>
SEP Requirements Reviews	2Q	2Q	2Q	2Q	2Q	2Q	
SEP Projects Reviews	4Q	4Q	4Q	4Q	4Q	4Q	

NOTE: Numerous individual projects are ongoing under the Soldier Enhancement Program (SEP) and each project has its own milestone schedule

ARMY RDT&E COST ANALYSIS(R-3)									February 2002			
BUDGET ACTIVITY <b>5 - Engineering and manufacturing development</b>					PE NUMBER AND TITLE <b>0604713A - Combat Feeding, Clothing, and Equipment</b>					PROJECT <b>668</b>		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Various	MIPR	SBCCOM, MA	2092	1791		2314		2496		0	8693	0
b . Integrated Laser White Light Pointer	MIPR	PM-NVRSTA, VA	0	99		1066		1033		0	2198	0
c . Various	MIPR	PM-SA, NJ	5340	3331		4769		5159		0	18599	0
d . Canteen Water Insert	MIPR	PM-PAWS MI	220	0		0		0		0	220	0
e . Various	MIPR	SBCCOM, MD	974	461		387		391		0	2213	0
f . Lightweight Low Profile Voice Amplifier	MIPR	PM-NBC, MD	200	0		0		0		0	200	0
g . Smart Mine Probe	MIPR	PM-MCD, VA	150	0		0		0		0	150	0
h . Pattern Generation	MIPR	CECOM, NJ	79	30		0		0		0	109	0
Subtotal:			9055	5712		8536		9079		0	32382	0
Remarks: Candidates for the Soldier Enhancement Program are received, reviewed, and approved annually. Contractual efforts primarily are focused on procuring prototypes for testing.												

ARMY RDT&E COST ANALYSIS(R-3)									February 2002			
BUDGET ACTIVITY <b>5 - Engineering and manufacturing development</b>					PE NUMBER AND TITLE <b>0604713A - Combat Feeding, Clothing, and Equipment</b>					PROJECT <b>668</b>		
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Various	MIPR	TSM-SDR, GA	200	225		100		227		0	752	0
b . Various	Contracts	Various	2020	4365		2688		2058		0	11131	0
c . DCD Support - Military Police	MIPR	GSA/FEDLEARN	94	110		120		130		0	454	0
d . Logistics Support	MIPR	Army Logistics Support Activity	0	78		45		50	4Q	0	173	0
e . DCD Support	MIPR	Armor School, KY	0	108		0		0		0	108	0
f . Various	MIPR	West Point, NY	0	329		0		0		0	329	0
g . Various	MIPR	NVEOD, VA	0	115		0		0		0	115	0
h . Various	MIPR	AMCOM, AL	0	50		0		0		0	50	0
Subtotal:			2314	5380		2953		2465		0	13112	0
Remarks: Support costs vary annually depending on the type of items we are evaluating. Research Development and Engineering Centers support to evaluate items also varies annually depending on the number and types of items.												

ARMY RDT&E COST ANALYSIS(R-3)									February 2002			
BUDGET ACTIVITY 5 - Engineering and manufacturing development					PE NUMBER AND TITLE 0604713A - Combat Feeding, Clothing, and Equipment					PROJECT 668		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Various	MIPR	SBCCOM(OFIG), Natick, MA	25	0		0		0		0	25	0
b . Various	MIPR	OPTEC/ATEC,	1281	170		120		120		0	1691	0
Subtotal:			1306	170		120		120		0	1716	0
Remarks: Testing costs vary annually by item(s) and are primarily funded by customers using the program dollars we send to them.												
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . In-House		PM-Soldier Equipment, VA	1305	2500		2383		2517		0	8705	0
Subtotal:			1305	2500		2383		2517		0	8705	0
Remarks: Costs vary annually depending on number and type of items being evaluated.												
Project Total Cost:			13980	13762		13992		14181		0	55915	0



ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2002					
BUDGET ACTIVITY 5 - Engineering and manufacturing development				PE NUMBER AND TITLE 0604713A - Combat Feeding, Clothing, and Equipment					PROJECT C40			
COST (In Thousands)				FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
C40	SOLDIER SUPPORT EQUIPMENT - ED			8636	8643	13367	14059	14418	11145	11159	0	87457
<p><b><u>A. Mission Description and Budget Item Justification:</u></b>This project supports the engineering and manufacturing development and integration of field shelters, showers, latrines, heaters, mortuary affairs, organizational equipment, and other combat service support equipment to improve unit sustainability and combat effectiveness. Project supports development and type classification of personnel and cargo parachutes, airdrop containers and other aerial delivery equipment to improve safety and efficiency of airborne operations. Project supports development of tactical field shelters including a series of Rigid Wall Shelters (RWS) with added capabilities and enhanced survivability. This project develops critical enablers that support the Legacy-to-Objective transition path of the Army’s Transformation Campaign Plan.</p>												
<p><b><u>FY 2001 Accomplishments:</u></b></p> <ul style="list-style-type: none"><li>500 Conducted Design Validation of the Advanced Tactical Parachute System/Advanced Reserve Parachute System (ATPS/ARPS).</li><li>85 Procured ATPS/ARPS Design Validation test items, (20 @ \$4,250ea).</li><li>1732 Initiated Developmental Testing for the ATPS/ARPS.</li><li>120 Procured Developmental Test items for ATPS/ARPS (30 Phase I test items @ \$4,000 ea).</li><li>300 Conducted Technical and Operational Testing and User Field Evaluation for Chaplaincy Logistical Support Package.</li><li>450 Conducted Milestone B, Fabricated Prototypes (2 @ \$125K ea.)and conducted DT, OT and Log Demo for the Containerized Chapel.</li><li>500 Completed Milestone B on the Space Heater Small. Initiated fabrication of prototype 60K BTU Space Heater Convective. Completed Milestone C and conducted technical testing on Space Heater Small Production Demonstration Models.</li><li>1194 Completed testing and field evaluations of Modular General Purpose Tent System P3I prototypes.</li><li>549 Performed Design Verification Testing on the 500 ft. Low Velocity Airdrop Capability (LVADC).</li><li>322 Procured test items (5 @ \$65.4K) for 500 ft. LVADC Design Verification Testing.</li><li>2884 Awarded contract to adapt and modify WASTECH International, Inc. microwave technology to produce bench-scale prototype components of a deployable, modular sanitary waste treatment system.</li></ul>												
Total	8636											

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		February 2002
BUDGET ACTIVITY <b>5 - Engineering and manufacturing development</b>	PE NUMBER AND TITLE <b>0604713A - Combat Feeding, Clothing, and Equipment</b>	PROJECT <b>C40</b>
<p><b><u>FY 2002 Planned Program</u></b></p> <ul style="list-style-type: none"> <li>• 2980 Complete Developmental Testing and conduct Milestone II for the ATPS/ARPS.</li> <li>• 120 Procure test items for the Developmental Testing of Phase II ATPS/ARPS (30 ea @ \$4,000).</li> <li>• 1057 Plan for and conduct Down-Select Testing on the 500 ft. LVADC.</li> <li>• 890 Procure test items (14 @ \$63K) for the Down-Select Testing of 500 ft. LVADC.</li> <li>• 500 Obtain Milestone C Type Classification - Standard and Material Release for the Containerized Chapel.</li> <li>• 600 Complete Full-Rate Production Decision for Space Heater Small. Conduct Technical Testing on Space Heater Large. Conduct Milestone B for the Space Heater Large. Conduct Milestone B for 60K BTU Space Heater Convective.</li> <li>• 600 Procure Test items (liners; Frame/pole interface; and Plenum)for the Modular General Purpose Tent System (MGPTS) P3I (10 complete systems @ \$25K ea.). Initiate system Testing and Evaluation</li> <li>• 396 Investigate and evaluate airbeam technology and composite materials for potential employment in the Lightweight Maintenance Enclosure (LME) P3I and Tent, Extendable, Modular, Personnel,(TEMPER). Develop and evaluate LME P3I enhancements.</li> <li>• 1500 Fabricate prototypes (2 @ 250K ea) and initiate Developmental and Operational Testing on the Containerized Batch Laundry (CBL).</li> </ul> <p>Total 8643</p> <p><b><u>FY 2003 Planned Program</u></b></p> <ul style="list-style-type: none"> <li>• 2330 Award Option II for the ATPS/ARPS contract. Conduct Operational Testing.</li> <li>• 945 Procure Operational Test (OT) items for the ATPS/ARPS. (270 units @\$3.5K ea).</li> <li>• 2620 Conduct Developmental Testing for the 500 ft. LVADC. Initiate Operational Testing.</li> <li>• 890 Procure Test items (15 systems @ \$58+K ea.) for 500 ft. LVADC Operational Testing.</li> <li>• 1600 Conduct Milestone C for Space Heater Large. Conduct Technical Testing on 60K BTU Space Heater Convective and transition into production.</li> <li>• 1500 Conduct technology demonstration and feasibility tests on the LME P3I and assess integration of proven airbeam technology into LME and MGPTS.</li> <li>• 1430 Conduct Developmental and Operational Testing on the Enhanced Container Delivery System (ECDS).</li> </ul>		

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2002

BUDGET ACTIVITY

**5 - Engineering and manufacturing development**

PE NUMBER AND TITLE

**0604713A - Combat Feeding, Clothing, and Equipment**

PROJECT

**C40**

## FY 2003 Planned Program (Continued)

- 1594 Type Classify CBL (MS C) and initiate water recycling product improvements.
- 458 Initiate developmental testing on the Mobile Integrated Remains Collection System (MIRCS).

Total 13367

<u>B. Other Program Funding Summary</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>To Compl</u>	<u>Total Cost</u>
RDTE, 0603747.C09, Soldier Support Equipment - AD	6465	8837	12000	13146	13290	10392	10488	Continuing	Continuing
MA7805, Universal Static Line	3934	0	0	0	0	0	0	0	4910
MA8061, Lightweight Maintenance Enclosure	5548	6590	7730	7733	7715	5993	5986	0	50985

C. Acquisition Strategy: Accelerate product development and testing to transition to Production.

<u>D. Schedule Profile</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
Complete Milestone C for the Space Heater Small	2Q						
Award Development contract for Space Heater Convective (60K BTU)	4Q						
Conduct Technical/Operational Test for Chaplaincy Logistical Support Package	2Q						
Complete Milestone III for the Chaplaincy Logistical Support Package		1Q					
Start Developmental Testing of Advanced Reserve Parachute System/Advanced Tactical Parachute System.	4Q						
Conduct Field Evaluation on Lightweight Maintenance Enclosure P3I and TEMPER Improvements		4Q					
Conduct MS B for the Space Heater Large		4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)						February 2002	
BUDGET ACTIVITY <b>5 - Engineering and manufacturing development</b>			PE NUMBER AND TITLE <b>0604713A - Combat Feeding, Clothing, and Equipment</b>			PROJECT <b>C40</b>	
<b><u>D. Schedule Profile (continued)</u></b>	<b><u>FY 2001</u></b>	<b><u>FY 2002</u></b>	<b><u>FY 2003</u></b>	<b><u>FY 2004</u></b>	<b><u>FY 2005</u></b>	<b><u>FY 2006</u></b>	<b><u>FY 2007</u></b>
Fabricate Containerized Chapel Prototypes	2Q						
Conduct Technical/Operational Tests for Containerized Chapel.	4Q						
Complete Milestone C, and Type Classify-Standard the Containerized Chapel		3Q					
Complete Full Rate Production Decision for the Space Heater Small		3Q					
Complete DT on ATPS/ARPS		2Q					
Initiate DT and OT on CBL.		4Q					
Type Classify the Space Heater Large			4Q				
Conduct OT on ATPS/ARPS			3Q				
Conduct DT and OT on 500 Ft. LVADC			3Q				
Type Classify (MS C) CBL.			3Q				
Conduct DT and initiate OT on ECDS.			4Q				

ARMY RDT&E COST ANALYSIS(R-3)									February 2002			
BUDGET ACTIVITY <b>5 - Engineering and manufacturing development</b>					PE NUMBER AND TITLE <b>0604713A - Combat Feeding, Clothing, and Equipment</b>					PROJECT <b>C40</b>		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . SBCCOM	In-House	SBCCOM (NRDEC), Natick, MA	2517	654		1797		2175		2522	9665	9665
b . Contracts	Various	Various	9612	4211		2877		4243		9606	30549	30549
c . Inflation Withhold			0	0		0		0		6	6	6
Subtotal:			12129	4865		4674		6418		12134	40220	40220
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0

ARMY RDT&E COST ANALYSIS(R-3)									February 2002			
BUDGET ACTIVITY <b>5 - Engineering and manufacturing development</b>					PE NUMBER AND TITLE <b>0604713A - Combat Feeding, Clothing, and Equipment</b>					PROJECT <b>C40</b>		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . TECOM/OEC	MIPR	Various	7368	3496		3519		6274		4551	25208	25208
Subtotal:			7368	3496		3519		6274		4551	25208	25208
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . PM Office	In-House	SBCCOM, Natick, MA	1517	275		450		675		1562	4479	4479
Subtotal:			1517	275		450		675		1562	4479	4479
Project Total Cost:			21014	8636		8643		13367		18247	69907	69907

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2002		
BUDGET ACTIVITY <b>5 - Engineering and manufacturing development</b>				PE NUMBER AND TITLE <b>0604713A - Combat Feeding, Clothing, and Equipment</b>				PROJECT <b>L40</b>	
COST (In Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
L40 CLOTHING & EQUIPMENT	5117	4522	4651	5209	5193	5478	5571	0	43285
<p><b><u>A. Mission Description and Budget Item Justification:</u></b> This project develops state-of-the-art individual clothing and equipment to improve the survivability, mobility, and sustainment affecting the quality of life of the individual soldier. Funding shown does not reflect funding from OSD PE 0604384BP to support the Chemical/Biological Defense program in accordance with Public Law 103-60 Title XVII. This project supports the Legacy-to-Objective transition path of the Army's Transformation Campaign Plan.</p> <p><b><u>FY 2001 Accomplishments:</u></b></p> <ul style="list-style-type: none"> <li>148 Updated fabrics, style changes, and consolidated dress clothing for Joint Services.</li> <li>96 Provided integration support of the Air Warrior Program.</li> <li>1030 Completed developmental testing/operational testing, achieved Milestone C, and initiated production for the Modular Lightweight Loadbearing Equipment.</li> <li>160 IABDU - Improved Aircrew Battle Dress Uniform, achieved Milestone B, awarded developmental contract, procured prototype items, and prepared to begin user evaluation.</li> <li>552 Awarded developmental contract, and initiated developmental/operational testing for the Concealable Body Armor.</li> <li>55 Selected various dress uniform styles and fabrics and presented recommendations to the Army Uniform Board for the Army Service Uniform Modernization.</li> <li>961 Selected a variety of injury reducing socks, procured items for test, and initiated large scale user evaluation for the Study of Foot Injury Reduction.</li> <li>2115 Continued In-house engineering support services, computer services, and conduct technical and program reviews.</li> </ul> <p>Total 5117</p>									

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		February 2002
BUDGET ACTIVITY 5 - Engineering and manufacturing development	PE NUMBER AND TITLE 0604713A - Combat Feeding, Clothing, and Equipment	PROJECT L40
 <u>FY 2002 Planned Program</u>		
• 105	Small Unit Multipurpose Trailer (Soldier equipment item), solicit proposals, award developmental contract, procure test items and initiate user evaluation.	
• 500	Integrated Head Protection , collaborate with NATO nations on functional trade-offs and identify integration opportunities.	
• 625	Advanced Bomb Suit, solicit proposals, award developmental contract, procure test items and initiate operational testing.	
• 320	Improved Toxicological Agent Protective Boots, Glove, and Apron, solicit proposals, award developmental contract, procure test items and initiate testing.	
• 401	Concealable Body Armor, complete testing, achieve Milestone C, and initiate production.	
• 200	Improved Aircrew Battle Dress Uniform, conduct and complete user evaluation, and amend ABDU performance specification as required.	
• 90	Army Service Uniform Modernization, receive CSA approval to develop concepts and initiate study of alternatives	
• 1264	Update fabrics, style changes, and consolidate dress clothing for Joint Services	
• 65	Alternative Fabric for Extended Cold Weather Clothing System, obtain sample items manufactured using alternative materials for use in a field evaluation.	
• 952	In-house engineering support services, computer services, and conduct technical and program reviews.	
Total 4522		
 <u>FY 2003 Planned Program</u>		
• 345	Small Unit Multipurpose Trailer (Soldier equipment item), complete user evaluation and begin operational testing.	
• 400	Integrated Head Protection, award developmental contract, procure test items, and initiate integration efforts.	
• 100	Advanced Bomb Suit, complete operational testing, achieve Milestone C, and intitiate production.	
• 1919	Military Eye Protection System, complete user evaluation, conduct operational testing, achieve Milestone C, and initiate production.	
• 700	Army Service Uniform Modernization, downselect designs and procure wear test items.	
• 150	Update fabrics, style changes, and consolidate dress clothing for Joint Services.	
• 170	Alternative Fabric for Extended Cold Weather Clothing System, migrate fabric alternatives to related wet weather gear.	



<b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>							<b>February 2002</b>					
BUDGET ACTIVITY <b>5 - Engineering and manufacturing development</b>				PE NUMBER AND TITLE <b>0604713A - Combat Feeding, Clothing, and Equipment</b>				PROJECT <b>L40</b>				
<p><u><b>FY 2003 Planned Program (Continued)</b></u></p> <ul style="list-style-type: none"> <li>• 867 In-house engineering support services, computer services, and conduct technical and program reviews.</li> </ul> <p>Total 4651</p>												
<u><b>B. Other Program Funding Summary</b></u>				<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>To Compl</u>	<u>Total Cost</u>
RDTE, 0603747.669, Clothing & Equipment				3360	4788	4881	5533	5258	5529	5918	Continuing	Continuing
OMA, 121017, Central Funding and Fielding				79590	90013	73401	80941	113533	114101	114672	Continuing	Continuing
<p><u><b>C. Acquisition Strategy:</b></u> Soldier modernization will be accomplished via acquisition programs ranging from NDI/modified NDI through integrated programs. Acquisition strategies will vary from: 1) quick fixes in 36 months or less from concept to Type Classification (TC) similar to Soldier Enhancement Programs (SEP), 2) modular improvements which require limited RDT&amp;E and will be completed in more than 36 months from concept to Type Classification, 3) fully integrated development that will require substantial RDT&amp;E funding and will be completed in 4 years or more.</p>												
<u><b>D. Schedule Profile</b></u>				<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>		
Life Cycle Systems Review				2-4Q	2-4Q	2-4Q	2-4Q	2-4Q	2-4Q	2-4Q	2-4Q	
<p>A Life Cycle System Review is held during the 2nd and 4th quarter of each fiscal year</p>												

ARMY RDT&E COST ANALYSIS(R-3)									February 2002			
BUDGET ACTIVITY 5 - Engineering and manufacturing development					PE NUMBER AND TITLE 0604713A - Combat Feeding, Clothing, and Equipment					PROJECT L40		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Various	MIPRS	SBCCOM, Natick MA	811	1050	1-4Q	1511	1-4Q	2298	1-4Q	Continue	Continue	Continue
b . Various	Contracts	Various	1308	1304	1-4Q	1239	1-4Q	886	1-4Q	Continue	Continue	Continue
Subtotal:			2119	2354		2750		3184		Continue	Continue	Continue
Remarks: Product development costs vary annually depending on the number and types of programs being evaluated.												
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Misc Support	MIPR	Various	50	96	1-4Q	50	1-4Q	50	1-4Q	0	246	0
Subtotal:			50	96		50		50		0	246	0
Remarks: Support Costs vary annually depending on number of and types of programs being evaluated.												

ARMY RDT&E COST ANALYSIS(R-3)									February 2002			
BUDGET ACTIVITY 5 - Engineering and manufacturing development					PE NUMBER AND TITLE 0604713A - Combat Feeding, Clothing, and Equipment					PROJECT L40		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Various	MIPRS	ATEC	469	472	1-4Q	720		500		0	2161	0
b . Various	MIPRS	SBCCOM (OFIG), Natick, MA	75	80	1-4Q	50		50		0	255	0
Subtotal:			544	552		770		550		0	2416	0
Remarks: Testing costs vary annually by item.												
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Various	In-House	PM-S, Ft Belvoir, VA	710	2115	1-4Q	952		867		Continue	Continue	Continue
Subtotal:			710	2115		952		867		Continue	Continue	Continue
Remarks: Management Services costs vary annually depending on the number and types of programs being evaluated.												
Project Total Cost:			3423	5117		4522		4651		Continue	Continue	Continue